

CLAIMS

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is as follows:

- 1 1. A device for displaying information, comprising a passive, mobile
2 display unit having a display screen, a receiver that receives downloaded
3 information and a processor for processing and storing the downloaded
4 information and providing control to the passive, mobile display unit to
5 display the information on the display screen.

- 1 2. The device of claim 1, wherein the display screen is a single line,
2 multiple line or graphic display.

- 1 3. The device of claim 1, wherein the processor includes memory for
2 storing the information.

- 1 4. The device of claim 1, wherein the receiver includes at least one
2 infrared data port, a radio frequency (RF) port and cellular port to receive
3 the downloaded information.

1 5. The device of claim 4, wherein during the download of information, the
2 processor ceases display operations and activates the display screen when
3 the download is completed.

1 6. The device of claim 1, wherein during the download of information, the
2 display screen continues to display the information.

1 7. The device of claim 1, wherein during the download of information, the
2 display screen displays default information loaded within memory of the
3 display unit until the download is completed.

1 8. The device of claim 1, further comprising one of a motion sensor and a
2 timer to activate the display screen.

1 9. The device of claim 1, wherein after a successful download is received
2 the passive display unit ignores any erroneous data input and begins
3 displaying the information on the display screen.

1 10. The device of claim 1, further comprising an anti-theft device.

1 11. The device of claim 10, wherein the anti-theft device is a global
2 positioning system or RF triangulation.

1 12. The device of claim 10, wherein the anti-theft device includes a sound
2 or light alarm or circuitry for activating a wheel-locking mechanism which
3 is activated when the passive display unit is moved beyond a determined
4 range from a central location.

1 13. The device of claim 1, wherein the display screen is one of a plasma
2 display, an organic light emitting diode (LED) display and active matrix
3 LCD display.

1 14. The device of claim 1, wherein the receiver is an infrared or radio
2 frequency (RF) receiver.

1 15. The device of claim 14, wherein:
2 the infrared receiver communicates at an effective data rate of
3 about 115,200 bits per second and is sensitive to establish an error-free
4 transmission at a distance of about 18 inches, and
5 the RF receiver communicates at an effective data rate of about
6 5,000 to 10,000 bits per second and is sensitive to establish an error-free
7 transmission at a distance of about up to at least 300 yards.

1 16. The device of claim 1, further comprising a power module to power
2 the display screen, processor and receiver.

1 17. The device of claim 16, wherein the power module includes a sleep
2 command to conserve energy and battery life.

1 18. The device of claim 1, wherein the passive display unit includes a
2 transmitter for message verification and is absent of any user controls.

1 19. The device of claim 1, wherein the passive display unit is void of user
2 inputs.

1 20. The device of claim 1, wherein the passive display unit is not
2 activated via a trigger signal.

1 21. A passive display system, comprising:
2 a computer which downloads and stores information;
3 a transceiver which downloads and stores the information received
4 from the computer; and
5 a passive, mobile display unit which receives the information
6 stored in the transceiver, at any location, and displays the information on a
7 display screen.

1 22. The system of claim 21, wherein the passive, mobile display unit is
2 programmed by the transceiver independent of any location of the
3 passive, mobile display .

1 23. The system of claim 21, wherein the transceiver is one of a mobile
2 and a fixed transceiver.

1 24. The system of claim 23, wherein the mobile transceiver includes:
2 an internal receiver that receives the information from the
3 computer;
4 an infrared transmitter for transmitting the information to the
5 passive display unit;
6 a processing unit controls functions of the internal paging receiver
7 and the infrared transmitter; and
8 a protected port connector to allow initial parameters to be entered,
9 and allow various message buffers to be downloaded into the mobile
10 transceiver.

1 25. The system of claim 24, wherein the internal receiver is field
2 programmable and is capable of receiving a minimum of four (4) cap
3 codes.

1 26. The system of claim 24, wherein the infrared transmitter
2 communicates at an effective data rate of approximately 115,200 bits per
3 second and at an intensity or signal strength to establish an error free
4 transmission at a distance of about 18 inches.

1 27. The system of claim 24, wherein the processor is pre-programmed to
2 at least one of:

- 3 (i) separate data and commands structure packets buffering
4 each for proper inclusion and execution;
- 5 (ii) assemble the data in form and sequence for download;
- 6 (iii) save the information in event of a power loss or failure;
- 7 (iv) store at least two complete unique downloads;
- 8 (v) receive, load, and change to alternate operational software
9 on command;
- 10 (vi) switch between transmitted message downloads on a time-
11 based command;
- 12 (vii) continuous transmit of the data on external command;
- 13 (viii) adjust the clock time with a received command;

- 14 (ix) store and load cap codes with the time-based command;
15 and
16 (x) store and change frequency with the time-based command.

1 28. The system of claim 21, wherein:

2 the passive, mobile display unit includes a RF receiver, and
3 the transceiver includes:

4 an RF receiver for receiving information from the
5 computer; and

6 an RF transmitter for transmitting the information to the
7 passive, mobile display unit,

8 wherein the transceiver is one of a fixed and mobile
9 transceiver.

1 29. The system of claim 21, wherein the passive, mobile display unit
2 includes:

3 an infrared receiving unit for receiving the information from the
4 transceiver; and

5 a processing unit for processing the information from the
6 transceiver.

1 30. The system of claim 28, wherein the processing unit includes a
2 motion sensor and an anti-theft unit..

1 31. The system of claim 29, wherein the processing unit includes a motion
2 sensor and an anti-theft unit.

1 32. The system of claim 21, wherein the display screen is one of (i) a
2 single or multiple line LCD display screen, (ii) a plasma display screen,
3 (iii) a graphical display, (iv) organic light emitting diode (LED) display
4 and (iv) active matrix LCD display.

1 33. The system of claim 21, wherein the passive, mobile display unit
2 includes one of a motion sensor and a timer to activate the display screen.

1 34. The system of claim 21, wherein:
2 during the download of the information, the processor ceases
3 display operations and activates the display screen when the download is
4 completed; and
5 after a successful download is received the passive display unit
6 ignores any erroneous data input and begins displaying the information.

1 35. The system of claim 21, wherein during the download of information,
2 the display screen continues to display the information.

1 36. The system of claim 21, wherein during the download of information,
2 the display screen displays default information loaded within memory of
3 the display unit until the download is completed.

1 37. The system of claim 21, wherein the passive display unit transmits
2 message verification.

1 38. A passive display system, comprising:
2 a computer which stores and transmits information;
3 a remote off-site transceiver receiving and transmitting the
4 information received from the computer; and
5 a passive, mobile display unit which receives the information from
6 the transceiver, and displays the information on a display screen.

1 39. A method of transmitting and displaying information on a passive
2 display unit, comprising the steps of:
3 downloading information from a computer system to a mobile
4 transceiver unit;
5 locating at least one passive display unit;

6 placing the mobile transceiver unit in proximity to the passive
7 display unit; and
8 transmitting the information from the mobile transceiver unit to a
9 receiver in the at least one passive display unit.

1 40. The method of claim 39, further comprising the step of ceasing
2 display operations during the download of the information.

1 41. The method of claim 39, wherein during the download of information,
2 the display screen continues to display the information.

1 42. The method of claim 39, wherein during the download of information,
2 the display screen displays default information loaded within memory of
3 the display unit until the download is completed.

1 43. The method of claim 39, further comprising activating the display
2 screen when the download is completed and ignoring any erroneous data
3 input.

1 44. The method of claim 39, wherein the downloaded information may be
2 downloaded from one of (i) internet, (ii) intranet, (iii) telephone, (iv) email
3 and (vi) wireless.

1 45. A method of transmitting and displaying information on a passive
2 display unit, comprising the steps of:
3 downloading information to a computer system;
4 transmitting the downloaded information to a single transceiver
5 unit;
6 locating at least one passive display unit; and
7 transmitting the information from the single transceiver unit to a
8 receiver in the at least one passive display unit regardless of a location of
9 the at least one passive display unit within a retail environment.

1 46. The method of claim 45, further comprising the step of ceasing
2 display operations during the download of the information.

1 47. The method of claim 45, wherein the downloaded information may be
2 downloaded from one of (i) internet, (ii) intranet, (iii) telephone, (iv) email
3 and (vi) wireless.

1 48. The method of claim 45, wherein the transmitting information to the
2 receiver and transceiver is accomplished by RF signals.